

# THE ROLE OF CEREMONIAL AYAHUASCA USE AND THE HEALING OF EATING DISORDERS: A QUALITATIVE STUDY

by

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## Abstract

Eating disorders (EDs) are serious mental disorders and are associated with significant physical, psychological and social impairments. As EDs are highly treatment-resistant, novel approaches are needed and therapeutic modalities from other cultures must be explored. A growing body of literature has revealed that individuals struggling with depression, anxiety and problematic substance use and most recently EDs, have reported physical and psychological improvements with the use of a psychoactive plant-based brew known as ayahuasca. The present manuscript-based thesis sought to better understand ayahuasca's potential value as a therapeutic tool in the treatment of EDs. Two qualitative studies were conducted to identify; 1) the perceived outcomes from ceremonial ayahuasca that may influence ED healing, and 2) the overall impressions of conventional ED treatment with a comparison of ayahuasca to these conventional approaches. Participants with a history of a diagnosed ED and experience with ceremonial ayahuasca were interviewed and the transcripts were analyzed using thematic analysis. Overall, the themes identified suggest that ayahuasca works as an integrative approach that includes psychological, physical, relational and spiritual aspects of healing. As well, in comparison to conventional-ED approaches, participants perceived that ayahuasca worked on a deeper, more emotional and spiritual level that was more effective than conventional treatment. The study results suggest that ceremonial ayahuasca can serve as a valuable therapeutic tool, giving hope to those individuals for whom conventional ED treatment approaches have not been effective. Further research studies on ayahuasca as adjuncts to ED treatment are warranted.

*Keywords:* Eating Disorders, Ayahuasca, Therapeutic potential, Conventional Eating Disorder Treatment

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## **Introduction**

Eating disorders (EDs) are debilitating mental disorders and have the highest mortality rate of all the mental disorders (Arcelus, Mitchell, Wales, Nielsen, 2011). The course of the illness can have a negative impact on physical, emotional, cognitive and social development (Klump, Bulik, Kaye, Treasure & Tyson, 2009). EDs are characterized by abnormal behavioural and psychological patterns of eating and body image concerns (American Psychological Association, 2013). Additionally, EDs have high comorbidity with mood, anxiety, and substance use (Hudson, Hiripi, Pope, & Kessler, 2007). The lifetime prevalence of EDs in women is 0.9% for anorexia nervosa and 1.5% for bulimia nervosa (Hudson et al., 2007). Because many individuals with an ED do not seek professional help, these prevalence rates may represent only a fraction of cases (Hoek, 2006).

The effectiveness of empirically based treatment approaches for adults with EDs are scarce and relatively ineffective (Le Grange, 2016). Although various interventions have been applied to treating EDs including psychosocial, behavioural or pharmacological approaches, they have led to less than favourable recovery outcomes. For example, treatment of bulimia nervosa with cognitive behavioural therapy (CBT), in both the short and long-term nonetheless falls short. More specifically, a 5-year follow-up study found that cessation of binge eating or purging behaviours was only 36% (McIntosh, Carter, Bulik, Framptom, & Joyce, 2011) and depending on the definition of recovery, rates varied from 65 to 83%. Clearly, a significant proportion of individuals with bulimia nervosa do not respond to these conventional therapies.

The case for anorexia nervosa is also underwhelming. Several psychotherapeutic modalities have been evaluated for their treatment efficacy in adults with anorexia nervosa and all have also

failed to yield significant clinical outcomes. Even more so than with bulimia nervosa, the body of research into the treatment of anorexia nervosa is limited in its effectiveness and stability of remission (50% at ten-year follow-up) (Keel & Brown, 2010). In fact, the evidence accumulated so far does not lend support to any one particular psychotherapeutic approach for adults with anorexia nervosa.

Taken together, these results emphasize the need for modifications made to current interventions and/or a paradigm shift that identifies innovative alternatives to ED treatment (Brown & Keel, 2012). To this end, and given that etiological and maintenance factors of EDs are a complex interplay of biological, psychological and social domains, recovery from an ED may be better achieved by a treatment approach that also focuses on a biopsychosocial or integrative perspective. In addition, EDs are a global public-health challenge and those in the field of ED research have suggested the consideration of therapeutic approaches from other cultures (Hay, 2013). Accordingly, an exploratory qualitative study by Lafrance et al., (2017) examined the experiences of individuals who had at some point in their lives been diagnosed with an ED and had used a traditional Amazonian plant-based brew commonly known as ayahuasca. Several positive outcomes were reported and included the improvement in ED symptomology and other comorbid symptoms, increased emotion processing and regulation and greater self-love. These findings were particularly compelling given that the sample included individuals who had previously participated in conventional ED-treatment programs in North America and had continued to struggle in their ED recovery. These preliminary findings warrant further investigation of ayahuasca as a therapeutic tool for the healing of EDs.

## Ayahuasca

Ayahuasca is a psychedelic plant-based brew from the Amazon and for centuries it has been used in rituals by indigenous and mestizo shamans and sacramentally in a few Brazilian-based syncretic churches. Over the last two decades, the popularity of ayahuasca has spread to other parts of the world for its potential health benefits and spiritual insight (Tupper, 2008).

Ayahuasca, is most commonly prepared by simultaneously boiling the woody bark of the vine *Banisteriopsis caapi* with the leaves of *Psychotria viridis* (Rivier & Lindgren, 1972). The *B. caapi* vine contains monoamine oxidase inhibitors, which render the hallucinogenic component N,N-dimethyltryptamine (DMT) found in the leaves of *P. viridis* active (McKenna, Towers, & Abbott, 1984). Free DMT can then pass from the circulatory system through the blood-brain barrier to the central nervous system where it can induce changes in perception and cognition (McKenna, 2004; Riba et al., 2001; Strassman, Qualls, Uhlenhut & Kellner, 1994). In Canada, DMT is considered a Schedule III substance under the 1996 Controlled Drugs and Substances Act, which strictly limits its uses to research.

In the context of indigenous and mestizo traditions, ayahuasca is administered in the form of a brew by an experienced healer (i.e. shaman, ayahuasquero, curandero). Although pre-preparation may vary, it is recommended that a certain diet restricting alcohol, red meats, dairy, salt, and sugar, as well as behavioural protocols such as abstaining from sexual activity and recreational and certain prescription drugs be observed (Tupper, 2009). Typically, the ceremony can last several hours, during which time other rituals may be performed, including the burning and smoking of sacred plants and the chanting songs (Luna, 1986). Common effects of drinking

ayahuasca include purgative and emetic effects, visions, insights, intense emotions and the recall of past memories (Barbosa, Giglio, & Dalgarrondo, 2005).

Ayahuasca as well as other psychedelics (e.g. LSD, MDMA, psilocybin), have received renewed attention in scientific research for their psychotherapeutic potential (Tupper, Wood, Yensen & Johnson, 2015). Exploratory investigations for the treatment of mood, affective and substance use disorders and most recently EDs, have demonstrated positive preliminary results (Carhart-Harris et al., 2018; Fábregas et al., 2010; Grob et al., 1996; Halpern, Sherwood, Passie, Blackwell, & Ruttenber, 2008; Lafrance et al., 2017; Loizaga-Velder & Verres 2014; Sanches et al., 2016; Thomas, Lucas, Capler, Tupper, & Martin, 2013). Although continued research is required to elucidate the exact mechanisms of action of ayahuasca and other psychedelics, research has identified possible biochemical (Bogenschutz & Johnson, 2016; Riba et al., 2003), neurobiological (Bouso & Riba, 2014; Carhart-Harris et al., 2012; de Araujo et al., 2012; McKenna & Riba, 2015; Palhano-Fontes et al., 2015; Riba et al., 2006), psychological (Lieber & Prickett, 2012; Soler et al., 2016) and spiritual (Garcia-Romeu, Griffiths, & Johnson, 2015; Griffiths et al., 2017; Loizaga-Velder & Verres, 2014) processes. It has been suggested that ayahuasca goes beyond the biopsychosocial paradigm of recovery, engaging in healing all aspects of the self, the physical, psychological, social and the spiritual, towards a more complete whole (Nielson & Megler, 2014).

### **The Present Study**

Anecdotal reports and exploratory research have highlighted ayahuasca's potential benefits in the treatment of some mental illnesses (Dobkin de Rios, 1972). The present manuscript-based thesis consisted of two studies aimed to expand on the preliminary investigation by Lafrance et

al. (2017), that explored the experiences of individuals who had or continued to struggle with an ED and who had participated in ceremonial ayahuasca at some point in their lives. The first study currently in press, qualitatively examined semi-structured interviews of individuals with a history of a diagnosed ED and experience with ceremonial ayahuasca and provided an overview of ayahuasca's perceived effects and therapeutic mechanisms, as well as identified other factors that may have influenced healing outcomes. In light of the lack of evidence supporting current approaches to ED treatment in the adult population, the second study (under review for publication) explored ayahuasca as a potential healing modality in comparison to experiences with conventional ED treatment. Interviews conducted from a subset of participants who had at some point in their lives participated in conventional ED treatment and ceremonial ayahuasca, were analyzed thematically. The results of this study will help provide a better understanding and an overall general impression of the ceremonial use of ayahuasca and its therapeutic potential in the healing of EDs. Implications for clinical practice as well as limitations of the studies are discussed.

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### Study 1: Ayahuasca and the Healing of Eating Disorders

Eating disorders (EDs) are complex mental health issues that involve cognitive, physical and emotional symptoms (Golden et al., 2003; Polivy & Herman, 2002). It is widely accepted that the avoidance of challenging emotions is central to the development and maintenance of an ED (Harrison, Sullivan, Tchanturia, & Treasure, 2009). Many have theorized that an individual's focus on and negative view of body image, along with attempts to change their body are more strongly related to the embodiment or acceptance of emotion, rather than physical weight and shape (Sim & Zeman, 2005). Negative affect is projected onto the body and engaging in ED behaviours offers temporary relief from unmanageable emotions. EDs also have the highest mortality rate of all the psychiatric disorders (Hoek, 2006) and are considered highly treatment-resistant, especially anorexia nervosa (Waller, 2016). As such, the field has called for innovative treatments to be considered, and as EDs are now a global phenomenon, therapeutic modalities from across cultures must also be explored (Hay, 2013).

Anecdotal reports have indicated that some individuals with EDs have explored the use of a plant-based psychedelic brew commonly known as ayahuasca, with positive results. A growing body of research points to promise of its utility in the healing of various mental health issues, including depression, anxiety, substance use disorders, and post-traumatic stress disorder (Fábregas et al., 2010; Halpern, Sherwood, Passie, Blackwell, & Rutenber, 2008; Loizaga-Velder & Verres, 2014; Palhano-Fontes et al., 2017; Sanches et al., 2016; Thomas, Lucas, Capler, Tupper, & Martin, 2013). Recent research has also found ayahuasca to have therapeutic benefit for individuals along the continuum of recovery from EDs, with respect to symptom reduction and embodiment, among other positive outcomes (Lafrance et al., 2017). Researchers

from around the globe are working to understand the therapeutic mechanisms of ayahuasca (Labate & Cavnar, 2014). Preliminary results suggest that ayahuasca works in a holistic manner, including the physical, psychological, and spiritual. For this reason, ayahuasca is a healing tool that has the potential to assist in moving towards an embodied and integrated sense of self.

## **The Medicine**

Ayahuasca, meaning “vine of the soul” in the Quechua language, is a psychoactive substance that originates from the Amazon. It is a brew prepared by boiling the *Banisteriopsis caapi* vine with other plants, but most commonly with the leaves of the *Psychotria viridis* shrub (Rivier & Lindgren, 1972). The plants contain the short-term reversible monoamine oxidase inhibitor (MAOI) alkaloids harmine, harmaline and tetrahydroharmine (*B. caapi*) and the psychoactive alkaloid dimethyltryptamine or DMT (*P. viridis*). The typical effects of the brew involve changes in perception and cognition (e.g. vivid visual and auditory sensations), newfound insights, recollections of memories, strong emotional experiences (e.g. happiness, sadness, fear), bodily sensations, and spiritual and transpersonal experiences (Riba et al., 2001; Shanon, 2002; Strassman, Qualls, Uhlenhuth & Kellner, 1994). Certain acute physical effects of ayahuasca are nausea, vomiting and diarrhea (Barbosa, Giglio, & Dalgalarondo, 2005).

Currently, at least 75 indigenous Amazonian tribes use ayahuasca for ritual and medical purposes (Luna, 2011). Ayahuasca has also been used as a sacrament in the Brazilian-based churches of the Santo Daime since the 1930s, and the União Vegetal since the 1960s. Over the past 25 years, the use of ayahuasca as a psychotherapeutic and spiritual tool has spread throughout North America, Europe and other parts of the world (Tupper, 2008).

The ritual and contextual uses of ayahuasca vary. In traditional practices, a ceremony can involve setting an intention and ingesting the brew in a group, with experienced leaders, or “ayahuasqueros” presiding (Luna, 1986). Ceremonies normally begin after sunset and last several hours. The ceremony leaders may chant, whistle, and sing melodies referred to as “icaros”—believed to assist with the healing process—throughout the ceremony (Luna, 1986). Typically for indigenous-style rituals, dietary and behavioural restrictions are adhered to several days before and after consuming the brew. The restrictions may relate to the consumption of recreational drugs, alcohol, red meat, dairy, salt, sugar, and sexual activity.

### **The Present Study**

There has been a recent resurgence in the scientific literature exploring the therapeutic potential of psychedelics, which include ayahuasca, for the treatment of mental health issues such as anxiety, mood disorders, and substance use disorders (Tupper, Wood, Yensen, & Johnson, 2015). The low remission rates of ED coupled with anecdotal reports of ayahuasca’s positive effects point to a need for further inquiry. In response, Lafrance et al. (2017), conducted interviews with 16 individuals with a history of both an ED and ceremonial ayahuasca drinking. Preliminary data revealed behavioural and psychological improvements, including ED symptom reduction or cessation, improved mood, decreased anxiety and problematic substance use, and improved capacity to process, regulate and embody emotions. Other significant outcomes included insights about the illness, and an improved relationship with the body. Some risks were also reported. For example, some participants noted that the preparatory diet resulted in some familiar ED thoughts. Also of note, one participant shared an experience of inappropriate sexual advances by a facilitator — raising the very important issue of personal safety of this indigenous

therapeutic practice without adequate regulatory structure. As a whole, this pioneering study opened the door for the exploration of ayahuasca's use as a potential healing modality among those with a history of an ED. Given the breadth of data collected, the purpose of this study is to report on additional outcomes from this sample.

## **Methods**

### **Data Collection**

A purposeful sampling strategy was employed using criterion-based sampling to select cases that were information-rich for our specific research (Patton, 2002). Participants were recruited by word of mouth, advertising on online discussion groups, targeted listservs, social media, and a project website. To avoid a biased sample, participants who had experienced positive, neutral or negative experiences with ayahuasca were encouraged to participate. Inclusion criteria included participants that had been previously diagnosed with an ED by a medical or mental health professional and who had participated in ayahuasca in a ceremonial context at some point in their adult lives.

### **Participants**

As part of the larger study, participants (14 women, 2 men,  $M_{age} = 34$  years, age range: 21-55 years) meeting the inclusion criteria were interviewed. Most of the participants were born in North America ( $n=15$ ) and had received a university education ( $n=13$ ). The sample included 10 participants with a previous diagnosis of anorexia nervosa and six with a diagnosis of bulimia nervosa. Many participants ( $n = 13$ ) had at some point received ED treatment in inpatient, day hospital and outpatient settings, where various psychotherapeutic modalities were employed. These included cognitive-behavioural therapy, dialectical behaviour therapy, acceptance and



commitment therapy, eye movement desensitization and reprocessing, rational emotive behaviour therapy, psychodynamic psychotherapy and family-based therapy. The approximate number of ayahuasca ceremonies in which interviewees participated ranged from 1-30. The majority of participants attended multi-day retreats that incorporated two or three successive ceremonies that were rooted in Amazonian traditions (i.e. Shipibo, Ashaninka). For additional information on participant characteristics, refer to Lafrance et al. (2017).

## **Procedure**

Ethics approval was received from Laurentian University and the University of British Columbia. Informed consent was obtained prior to data collection, and following the interview participants were offered information about ED services in their area. The interview schedule was administered via telephone and the call was recorded. The interviews were approximately 75-180 minutes in length and were transcribed verbatim. Transcriptions were reviewed for accuracy by a research assistant and/or a study author.

## **Semi-Structured Interview Schedule**

The interview schedule was developed based on the methodology of Loizaga-Velder and Verres (2014) and the Ayahuasca Treatment and Outcome Project (Rush, personal communication). The interview was semi-structured and included questions relating to participants' subjective evaluations of ayahuasca's therapeutic potential. Sample questions included: What is your understanding of how ayahuasca was helpful with respect to ED symptoms? Other mental health symptoms? Emotion regulation? Were there any experiences during the ayahuasca sessions that were most significant for you in your therapeutic process from recovery from an ED? The participants were asked follow-up questions when appropriate.

## **Qualitative Analysis**

The interviews were analyzed for themes and patterns by a three-membered team using the methodology of thematic analysis (Braun & Clarke, 2006). Each theme was reported along with the number of participants who endorsed the specific theme.

Inter-coder reliability was measured using average pairwise percent agreement to determine the accuracy of the application of codes to the transcripts among the three coders. Any sub-themes that fell below 80% average agreement were reviewed as a team and a consensus on the final themes was negotiated (see Lafrance et al. (2017), for a detailed description of the methodology).

## **Rigor**

Rigor was ensured during data analysis by methods of investigator triangulation and member checking (Patton, 2002). To confirm accuracy of the analysis, member checking was completed by providing a summary of the results to all participants. Participants were invited to review the themes and provide feedback regarding the degree to which the results accurately reflected their experiences.

## **Results**

### **Qualitative Analysis**

Following thematic analysis of the qualitative interviews, several themes emerged that related to psychological, physical, relational and spiritual effects perceived to be a result of ceremonial ayahuasca. Table 1 provides an overview of the themes and sub-themes identified from the semi-structured interviews in this study as well as those themes reported in Lafrance et

al. (2017). The inclusion of the Lafrance et al. (2017) themes was done to provide a comprehensive overview of the perceived outcomes from the same sample of participants. The themes were ranked based on frequency in reporting.

Table 1

*Overview and ranking of sub-themes identified from semi-structured interviews*

Theme	Sub-theme	Participant Endorsement	
		%	n
Psychological Effects	Improved emotion processing and regulation <sup>*</sup>	87.5	14
	Validated or transformed subjective theory of illness <sup>*</sup>	81.2	13
	Developed greater capacity for self -love, -acceptance, -esteem, -forgiveness, -compassion <sup>*</sup>	81.2	13
	Decreased or cessation of ED symptoms <sup>*</sup>	68.7	11
	Discovered insights and/or experienced revelatory visions in ceremony <sup>*</sup>	68.7	11
	Addressed root cause of the ED and/or trauma <sup>*</sup>	62.5	10
	Reduced anxiety, depression/self-harm, suicidality <sup>*</sup>	56.2	9
	Reduced cravings and/or use of psychoactive substances <sup>*</sup>	50.0	8
	Increased mindfulness	37.5	6
Body Perception and Physical Sensations and Effects	Acquired insight into purging in ceremony in comparison to purging as a symptom of the ED <sup>*</sup>	62.5	10
	Improved relationship with the body <sup>*</sup>	50.0	8
	Improved relationship with food and eating	50.0	8
	Regulation of weight	31.2	5
	Improved general physical health	18.7	3
Relational Effects and Experiences	Improved relationships with family, children and/or romantic partners	62.5	10

Spiritual and/or Transpersonal Effects and Experiences	Experienced intergenerational or relational visions/insights in ceremony	56.2	9
	Acquired awareness of spiritual/transpersonal connections	93.7	15
	Experienced spiritual/transpersonal connections in ceremony	62.5	10
	Transformed contemplative spiritual or religious practices	56.2	9

<sup>\*1</sup> Discussed in a Lafrance et al. (2017)

**Psychological effects.** A description and interpretation of the sub-themes reflecting the effects of ayahuasca on a psychological level have been described in the exploratory study noted above (Lafrance et al., 2017) which include the participants' perceived: 1) improvement in their capacity to process and regulate emotions; 2) insight into their believed root cause of their ED; 3) increase in their capacity for self-love, -esteem, -compassion, and -forgiveness; 4) acknowledgement of the root cause of the ED and/or previously experienced trauma; 5) reduction of thoughts and symptoms of the ED, anxiety, depression, self-harm, and suicidality; and 6) decrease use of and cravings for psychoactive substances.

In addition to the published sub-themes, participants described an increase in their capacity for mindfulness. This included an improved ability to remain in the present moment as well as the ability to experience a greater sense of contentment (37.5%). A psychology graduate student recounted her experience:

A kind of happy after effect is that I'm much more able to live in the moment as opposed to kind of always focusing on the future next thing and more able to just accept what comes today. So, it could even be anxiety, for sure the future planning was an anxiety thing, it was always kind of a perfectionist thing you know 'After I get this degree then I'll have fun,

eventually I'll have fun', and this summer was the most fun I've had in a very long time.

(P11)

**Body perception and physical sensations and effects.** The theme relating to physical effects and well-being is comprised of four sub-themes centered around improvements in: 1) the relationship with the body; 2) the relationship with food; 3) weight regulation; and 4) general physical health. An additional sub-theme relates to insight into purging in the context of ayahuasca in comparison to purging as a symptom of the ED.

As a result of ayahuasca drinking and in the time period following participation in ceremonies, some individuals experienced their body in a more positive way. This shift was often accompanied with profound feelings of gratitude and honor for their physical body. For some participants, acute visions in ceremony were powerful vehicles for facilitating this transformation. For example, one participant visualized her body as a *“hollow decaying skeleton,”* juxtaposed with visions of herself as a *“beautiful full-bodied woman”* which precipitated a deep desire for healing in that she couldn't wait to *“get back and just start gaining some weight”* (Lafrance et al., 2017).

Similarly, some participants noted a shift towards more balanced food choices and a greater awareness of hunger cues. Others experienced newfound appreciation and respect for food as a form of nourishment, as opposed to a means through which to engage in symptoms. One participant reported a transformation in her ability to engage in mindful eating: *“Now I sit down and every meal I'm able to stop, to chew, to fully be mindful in my meal. I'm not reading, I'm not watching TV, I'm not listening to anything. I really enjoy that moment.”* (P16)

Participants also gained insight into the ways in which their body weight had meaning beyond simply being a consequence of restrictive or binge-eating symptomatology. For some participants, this deeper insight resulted in subsequent changes to their actual body weight, in the direction of their natural set point. A life coach gained insight into both her use of food as a strategy for self-soothing as well as her excess weight as a form of self-protection:

It feels like to me that the weight had something to do with protecting myself and because of ayahuasca I don't have to protect myself anymore . . . and so I started working with the medicine in May and I lost weight without any help, all of a sudden it just melted off . . . I was eating at the hole, which I'm not anymore. (P4)

Ceremonial ayahuasca drinking was also reported to lead to better physical health. Changes included improvements related to, or resolution of chronic health issues that had proven difficult to manage using conventional medicine, including Polycystic Ovarian Syndrome (PCOS), chronic fatigue, and elevated blood pressure. A registered nurse with a history of PCOS shared that after 5 years of amenorrhea (a hallmark of anorexia nervosa), her menstrual cycle resumed after two ayahuasca ceremonies, and has been regular since that time.

The final sub-theme related to purging in ceremony and how it compared to purging as a symptom of the ED (Lafrance et al., 2017). Many participants (62.5%) described purging in ceremony as having a different quality, in that it was perceived as an integral part of the healing process.

**Relational effects and experiences.** Several participants reported improvements in their relationships with friends and loved ones, including parents, siblings, romantic partners, and children. They described newfound or deepened capacities for understanding, empathy and

acceptance. Following the ceremonies, some participants took action steps towards repairing ruptured relationships. One participant recalled how subsequent to his participation in ceremonies, he engaged in a transformational conversation with his brother, a person with whom he had endured painful childhood experiences. His teaching during the acute ayahuasca experiences allowed him to acknowledge his own suffering and that of his brother's, creating a pathway to compassion and forgiveness:

One of the first things I did when I returned after experiencing ayahuasca was speak to my older brother, who was one of the biggest sources of trauma growing up. And we spoke and I was really shocked by the results. I was communicating with him based on what I had experienced. One of the main points was that he was only capable of the form of abuse that he engaged in from suffering himself. And that if we were going to have a relationship, he was going to have to acknowledge that he needed to heal and to engage in that healing in whatever form that it took. And upon having this discussion with him I was really shocked to see that he actually began to cry. And that's not something we ever do in front of each other. This is all surreal it ever happened, we hugged it out and we began talking about different forms of treatment. (P2)

Several participants reported visions and insights related to important relationships and ancestral lines. These experiences included: feeling a deep connection with caregivers; moving through pain from family-based trauma; and accepting that their loved ones cared for them as best they were able given their own psychological wounds. For example, one participant described an encounter with an ancestor in which she was shown the intergenerational pain fueling the transmission of maltreatment and abuse in her family. Another participant recalled an

acute experience during which she was able to connect with her mother's wholehearted and unconditional love for her as well as her pain:

I had a ceremony where I was a baby and my mom was holding me and I was experiencing the expression of her unconditional love for me which I know was there underneath all of her own conditioning and woundedness. So, the medicine was able to show me that – it really re-patterned that for me - I was able to feel that, like absorb that on a cellular level and to feel a lot of compassion for her as well. (P7)

**Spiritual and/or transpersonal effects and experiences.** Nearly every participant commented on powerful spiritual and transpersonal effects both during and after participation in ceremonies. The majority of participants recounted an acute experience during which they felt a deep connection to God, a greater entity and/or nature. One participant shared how this in-ceremony experience led to a deepening of her belief in universal love:

I know one of my initial ceremonies I had an experience that was really profound . . . So, I've been raised to think and believe in a God and think that we're all one. So it's hard to really believe it because it's so not tangible and I know when I did that ceremony I felt so connected to God and to that divine presence that there was a beautiful sense of life, like everything was just so beautiful. Life was connected, the birds, the trees, everything had a pulse, everything lived. You know shadows came out but there was an abundance of love. So, because my first ceremony was love I believe it now that it does exist and we're all worthy of it because we're all one, we're all loved. (P8)

Other participants reported that their intense spiritual experiences led to insights into the meaning of life and their role in it. One participant described an acute experience of oneness with



nature that also put into perspective the grandeur of life on earth, thus helping to reduce the relative importance of her body weight.

I felt like I was down and the soil was blanketing me and the branches were wrapping themselves around me. I just felt like there's this super intelligence and I feel like that's something I can't take for granted. It's a life force. I feel like I'm a life force and I feel it's all connected now. I'm connected and I'm part of the earth and when I die, my roots and my energy will become some other life force and I just feel like everything is so much more special and it's beyond the stereotype of weight. (P1)

Another sub-theme that emerged related to an increase in religious, spiritual or contemplative practices post-ayahuasca drinking. More than half the participants indicated that these increases involved engagement with meditation, yoga, journaling, and a deeper appreciation for, or reintegration of the practice of prayer. One participant described her deepened re-connection with prayer:

I grew up going to church and then we stopped going to Catholic church when I was like 8 or 9 and we'd go for holidays you know, celebrate Easter and Christmas but I felt really disconnected from that religion and so now I understand more about what prayer is and I do it, and that really helps to anchor me. (P3)

**Member checks.** Member checks sought participant feedback on the accuracy of the research findings. Only one participant provided additional commentary following member checking, sharing that her lengthy struggle with an ED had ended, her weight had increased and her quality of life had improved:

My 18-year-long eating disorder has stopped. It has been two years since. I was at 95 pounds when I stopped my eating disorder. I am now 110-115 pounds. I had another ceremony telling me to stop tread-milling. I have dramatically reduced my exercise load. I have become a teacher and I have a successful career now! (P1)

## **Discussion**

In this pioneering study, qualitative analysis was conducted to identify the perceived outcomes of ceremonial ayahuasca use among individuals with a history of a diagnosed ED. In the context of this second study, thematic exploration of the participant interviews resulted in the identification of four major themes relating to improvements in various domains of functioning. Specifically, the findings suggest that ayahuasca facilitates healing in a holistic manner, where psychological, physical, social and spiritual aspects of the self are implicated in healing, in turn promoting an embodied wholeness.

### **Psychological Outcomes**

A wide range of psychological benefits related to ayahuasca drinking were reported and discussed in Lafrance et al. (2017). Highlights include the potential for ayahuasca in 1. supporting the processing of trauma and/or previously avoided emotion underlying ED symptoms, 2. reducing comorbid symptoms of depression, anxiety, self-harm, suicidality, and psychoactive substance use and 3. increasing the capacity to love oneself (Lafrance et al., 2017). In addition to these previously reported findings, participants noted improvements in their capacity for mindfulness, including an ability to observe, tolerate and embody their inner experiences, present-moment thoughts, and emotions. This finding is consistent with research that found individuals who had drunk ayahuasca experienced increased capacities for

mindfulness according to standardized self-report measures (Sampedro et al., 2017; Soler et al., 2016). They proposed that ayahuasca may facilitate therapeutic change by enhancing an individual's ability to decenter, or create distance from maladaptive thoughts and emotions. This is especially relevant for those struggling with an ED who sometimes experience a harsh and even unrelenting inner critic (Dolhanty & Greenberg, 2007). These findings are also in line with brain imaging studies that have shown that ayahuasca seems to modify the activity of the Default Mode Network (DMN: Palhano-Fontes et al., 2015; Sampedro et al., 2017), an area in the brain linked to self-referential mental activity, emotional processing and memory recollection (Raichle et al., 2001). These researchers propose that ayahuasca attenuates the DMN, which may allow for access to meditative states and potentially lead to introspection and changes in self-perception, processes that may facilitate ED recovery.

### **Body Perception and Physical Effects**

Visions in ceremony as well as insights following participation in ayahuasca ceremonies were perceived to facilitate a greater level of respect, love and gratitude for the physical body and food. In some cases, this phenomenon led to reduced ED symptoms, normalization of eating and weight, and more accurate perceptions of the body. Disturbances in eating behaviour such as extreme avoidance, restriction or intake of food are defining characteristics of EDs. Ayahuasca may help some individuals to reestablish a healthy and positive relationship with eating, where food is viewed as a source of nourishment for the body important for physiological health. Additionally, a hallmark of an ED is a turning away from and against the physical body in one's thoughts, attitudes and actions (Stice & Shaw, 2002). The way in which the body is experienced, treated, and nourished is central to the maintenance and resolution of ED symptoms. Therefore,

reconciliation with one's physical body in both attitude and action is, in our opinion, a crucial component of ED recovery. It appears from this study that ayahuasca can assist in this process by facilitating a shift – at least for some - towards a more positive relationship with the physical body that supports an integrated and embodied sense of self.

### **Relational Outcomes**

Along with physical and psychological impairments, EDs are known to adversely affect social functioning (Fairburn & Harrison, 2003). This is particularly true for those with anorexia nervosa, in which insecure attachments and a predisposition to obsessive compulsive, anxious and avoidant traits increase the risk and maintenance of the disorder (Treasure & Schmidt, 2013; Ward et al., 2001). Furthermore, as the illness progresses, loved ones may understandably experience and express strong emotional responses (Treasure & Schmidt, 2013). An individual who is anxious and emotionally avoidant may find such responses challenging to process and tolerate and, in turn this amplifies difficulties with social processing and emotion regulation, only to create more distanced and strained interpersonal relationships, and increased reliance on the ED for coping. Many participants in this study noted both transformation of childhood pain relating to attachment injuries or trauma as well as improvements in current relationships with loved ones. These findings confirm those of other studies of individuals participating in ceremonial ayahuasca, in which participants reported greater feelings of love and empathy for others (Harris & Gurel, 2012; Kjellgren, Eriksson, & Norlander, 2009) as well as improved communication, forgiveness and relationship repair (Harris & Gurel, 2012; Loizaga-Velder & Verres, 2014).

## **Spiritual and/or Transpersonal Effects**

Ayahuasca's effects on participants' deepening of their spirituality occurred through acute in-ceremony experiences of transcendental states, as well as spiritual teachings and insights experienced both in-ceremony and in the time that followed. These findings corroborate reports from individuals with substance use issues who had drunk ayahuasca and attributed their spiritual and transpersonal experiences to have therapeutic value, mainly by reducing drug cravings (Loizaga-Velder & Verres, 2014). Both participants and therapists surveyed hypothesized that these changes may be a result of an enhanced sense of life purpose and meaning, as well as trust in a connection with a higher entity or power. Research with the psychedelic psilocybin also reported that mystical experiences induced while under its effects evoked both personal meaning and spiritual significance, which in turn significantly correlated with reduced tobacco craving and use (Garcia-Romeu, Griffiths, & Johnson, 2015). Although the mechanism of change remains unclear, it has been hypothesized that these positive attitudinal and behavioural changes are the result of powerful spiritual insights and personal meaning interpreted from these acute mystical experiences (Bogenschutz & Pommy, 2012). With this in mind, it is possible that our participants' reported reductions in ED thoughts and symptoms may in part be a positive effect of their spiritual and transpersonal experiences induced by ayahuasca. Similarly, the spiritual tenets of 12-step addiction recovery programs, such as Alcoholics Anonymous, considers a spiritual transformation or "spiritual awakening" as a central component in changing addictive behaviour (Forcehimes, 2004). Research on spirituality and EDs has also demonstrated that improvements in spiritual well-being correlate with better

treatment outcomes, positive changes in attitudes about eating and body shape, and reduced ED symptomatology (Richards, Berrett, Hardman, & Eggett, 2006).

### **Ayahuasca's Therapeutic Process and Value**

Given that our primary outcomes reflect this triad of physical, psychological and social domains of healing, we feel it is critical for the field to consider a biopsychosocial approach to recovery. In fact, and in light of our findings, we would go further to again propose that those affected by an ED might be even better served by a biopsychosocial *and* spiritual approach to recovery, regardless of the modality employed. Although conventional ED modalities rarely incorporate a core spiritual component, preliminary research has suggested that spiritual growth may facilitate ED recovery (Richards et al., 2006), and this is supported by our findings.

### **Additional Considerations**

Although the preliminary findings of this study show promise for the ceremonial use of ayahuasca along the continuum of healing from an ED, it is important to delineate some of the risks associated with ayahuasca drinking. Concerns of ayahuasca drinking with an ED population have been expressed by Jacques Mabit (Labate, Anderson, & Jungaberle, 2011, p. 236), a medical doctor who incorporates ayahuasca as a part of an addiction treatment center in Peru. These concerns are related to the dietary restrictions and purging in the context of ayahuasca ritual preparation and participation that could potentially trigger or exacerbate ED thoughts and symptoms. While the results of the study by Lafrance et al. (2017) did not validate these concerns, they are based on a relatively small sample, and thus further investigation is warranted. Other considerations include the associated physical complications of EDs and possible contra-indications such as electrolyte imbalance, cardiac arrhythmias, low blood

pressure, as well as the potential concurrent use of contraindicated selective serotonin reuptake inhibitors (Callaway & Grob, 1998; Riba et al., 2001). These issues may also pose additional risks for those travelling to remote areas of developing countries to access ayahuasca, should complications arise requiring medical attention.

It's important to note as well that some individuals who seek out ayahuasca for mental health issues are desperate for help – especially if conventional treatments have not yielded improvements in symptoms or quality of life. Individuals who seek out ayahuasca for healing purposes may ignore, downplay or hesitate to discuss the associated risks with their loved ones or medical team for fear that they will not be supported, or may even be discouraged to seek out this healing modality. It is also not unheard of for individuals to express fear or concern about their loved one's use of ayahuasca, given the limited research on its use of ayahuasca among those with EDs. As such, medical professionals could benefit from education on the uses and mechanisms of action of ayahuasca and other psychedelics. The field also requires drug policy that supports the scientific research of ayahuasca among clinical populations most in need.

### **Study Limitations**

This study is not without limitations. There was potential selection bias in that individuals who agreed to participate may have experienced more positive effects of drinking ayahuasca and/or hold more positive views than individuals who did not volunteer to share their perspectives. Anecdotally, there have been reports of less than positive experiences, although these did not emerge in our study.

The interviews were also limited to individuals who had actively sought out ayahuasca, with no comparison to those who have not. There may be individual differences among those who

have felt drawn to and actively sought ayahuasca. This poses challenges to generalizing the results to all those with EDs.

In this study, our sample was also quite homogeneous: English-speaking individuals with current or historical EDs. Most of the participants were Caucasian women, and all but one was from North America. Our participants were a highly-educated group, and interestingly, many were employed in helping professions. As such, these individuals may have had greater insight into and theoretical understanding of the psychology of EDs, emotions and trauma, which could have affected their responses. Future research should also investigate the experiences of heterogeneous ayahuasca-drinking ED populations.

Finally, questions and prompts from the semi-structured interview may have influenced some of the participants' responses to support the research questions and outcomes. As such, future research must extend beyond the exploratory (i.e., longitudinal studies, controlled clinical studies) to evaluate the unique therapeutic potential of ceremonial ayahuasca drinking.

## **Conclusion**

We believe the study results are significant in that they provide new perspectives and opportunities for therapeutic pathways for EDs, especially among Westerners. These findings point to some of the potential therapeutic changes in the healing of EDs, some of which may inspire future innovative and integrative modalities of treatment.



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## Study 2: A Qualitative Comparative Study of Experiences with Conventional Eating Disorder

### Treatment and Ceremonial Ayahuasca for the Healing of Eating Disorders

Eating disorders (EDs) are serious mental disorders that negatively affect individuals at the neurobiological, cognitive, emotional, physical and social level (Klump, Bulik, Kaye, Treasure & Tyson, 2009). ED symptomology can include restrictive food intake, negative body image, and recurrent patterns of binge eating behaviours and compensatory behaviours such as self-induced purging, over-exercising and/or misuse of laxative/diuretics (APA, 2013). Furthermore, this class of disorders is often comorbid with mood, anxiety, and substance use disorders and has the highest mortality rate of all the psychiatric disorders (Hoek, 2006).

Although there have been significant advances in the field of ED treatment, outcomes are modest, while relapse and treatment drop-out rates remain high (Khalsa, Portnoff, McCurdy-McKinnon, & Feusner, 2017). The many obstacles to recovery highlight the continued need for treatment refinement as well as the consideration and exploration of novel approaches for treating EDs (Brown & Keel, 2012). As EDs can affect individuals around the world, there has also been a call to ED researchers and clinicians to look beyond Western-based psychotherapeutic interventions and explore treatment alternatives from across cultures (Hay, 2013). In this vein, a preliminary qualitative study (Lafrance et al., 2017) reported positive outcomes in individuals with EDs who explored the use of a traditional Amazonian plant medicine commonly known as ayahuasca.

### **Ayahuasca**

Ayahuasca is a psychoactive brew originating from the Amazon Basin. It is used in rituals by indigenous and mestizo shamans and as part of religious ceremonies in some Brazilian-based

syncretic churches. In the last 25 years there has been a surge of interest in ayahuasca as a psychotherapeutic and spiritual tool. Its use has spread from these traditional South-American communities throughout North America, Europe and other parts of the world (Tupper, 2008). Ayahuasca, is prepared by boiling the woody bark of the plant vine *Banisteriopsis caapi* in combination most commonly with the leaves of *Psychotria viridis* (Rivier & Lindgren, 1972). The *B. caapi* vine contains high concentrations of beta-carboline alkaloids, which function as short-acting reversible monoamine oxidase inhibitors, while the hallucinogenic component *N,N*-dimethyltryptamine (DMT) is found in the leaves of *P. viridis*. This combination of alkaloids when ingested orally in the ayahuasca brew activates the central nervous system through changes in perception and cognition, such as vivid visual and auditory sensations, newfound insights, memory recall, strong emotions, bodily sensations, and spiritual and transpersonal experiences (Riba et al., 2001; Strassman, Qualls, Uhlenhut, & Kellner, 1994). DMT is Schedule I substance under the 1971 Convention on Psychotropic Substances, which severely limits access to ayahuasca for scientific investigation in most countries, including Canada and the United States.

The indigenous and mestizo use of ayahuasca typically occurs in the context of a shaman-guided group ceremony. Although the format can vary, pre-preparation typically involves following dietary and behavioural restrictions (i.e. no alcohol, red meats, dairy, salt, sugar, pharmaceuticals, sexual activity) several days prior to the ceremony as well as setting an intention to define what the individual plans to learn or resolve through the experience (Luna, 2011). Typically, the shaman individually administers the ayahuasca in the form of a brew and once ingested, the individual participants engage in silent meditation for the duration of the



ritual. The ceremony lasts several hours, where the individual may experience nausea, purging, visions and insights and intense emotions (Barbosa, Giglio, & Dalgarrondo, 2005).

Psychedelics, including LSD, MDMA, psilocybin and ayahuasca have made a recent resurgence in research as potential therapeutic tools in the field of mental illness (Tupper, Wood, Yensen, & Johnson, 2015), including mood, affective and substance use disorders and as of most recently EDs (Carhart-Harris et al., 2018; Lafrance et al., 2017; Loizaga-Velder & Verres 2014; Sanches et al., 2016; Thomas, Lucas, Capler, Tupper, & Martin, 2013). In respect to EDs, interviews conducted with individuals with a history of both the illness and ceremonial ayahuasca drinking, reported the reduction or cessation of ED symptomology and other comorbid symptoms, increased emotion processing and regulation and greater self-love. Some challenges and risks were also noted by the participants which included, limited preparation and integration services, issues to personal safety and for some, the preparatory dietary restrictions resulted in some familiar ED thoughts (Lafrance et al., 2017). Primary outcomes from a follow-up study of the same sample suggested integrative mechanisms of action involving physical, psychological, relational and spiritual components of the self (Renelli et al., in press). For example, participants reported a positive transformation with their relationship with food and eating, improvements in their relationships with others and spiritual experiences that provided powerful insights and personal meaning. Although much additional research is required, these preliminary findings may suggest a holistic model of healing.

### **The Present Study**

Traditionally, ayahuasca has been used by Amazonian indigenous groups for medicinal, psychological and spiritual purposes. Preliminary research into the potential therapeutic benefits

of ayahuasca has indicated promising results as a treatment tool for mental illnesses, including EDs. An analysis of participant experiences who have participated in both conventional ED treatments as well as ceremonial ayahuasca drinking could help to clarify variables that may influence ED healing outcomes as well as improve our understanding of the ways through which ayahuasca could serve as an adjunct or alternative healing tool for those for whom conventional ED treatments are not appropriate or have not been effective.

## **Methods**

### **Recruitment and Participants**

A purposive sample of participants were recruited via word of mouth, social media, on-line discussion group advertisements, targeted listservs and a project website. Individuals with positive, negative or neutral experiences as a result of their experience with ayahuasca were invited to participate. A subset of the 16 participants from Study 1 were selected for further qualitative analysis. For the purposes of this study, inclusion criteria for participants were as follows: 1) diagnosis of an ED by a qualified professional 2) engagement in conventional ED treatment in North America during the course of illness and 3) participation in ceremonial ayahuasca at some point in their adult lives. Thirteen participants all residing in North America, met the inclusion criteria and included (12 women), eight diagnosed with anorexia nervosa and five diagnosed with bulimia nervosa. The mean age of the participants was 30.1 (range 21-49). ED treatment settings included outpatient (n=12), inpatient hospital (n=5), residential programs (n=2) and a clinical trial (n=1). Various psychotherapeutic modalities were reported and included cognitive behavioural therapy (CBT: n=8), dialectical behaviour therapy (n=3), family-based treatment (n=1), acceptance and commitment therapy (n=2), and eye movement desensitization

and reprocessing (n=1). Participants had attended a lifetime range of 1-30 ayahuasca ceremonies.

The majority of the participants had experienced indigenous-style multi-day retreats that included two or three ayahuasca ceremonies.

### **Semi-Structured Interview Schedule**

A semi-structured interview schedule was adapted from a similar study investigating ayahuasca drinking and the treatment of substance use disorders (Loizaga-Velder & Verres, 2014) and the Ayahuasca Treatment and Outcome Project (B. Rush, 2015, personal communication). The interview schedule included a broad range of questions. For the purpose of this study the questions analyzed related to participants' ED-relevant etiological, clinical and treatment histories, subjective evaluations and perceived effectiveness of previous conventional ED-focused therapies and comparison of ayahuasca to those treatments. Sample questions included: How did your ayahuasca experiences compare to conventional ED treatment? Were there any critical points changed by the encounters with ayahuasca that previous therapies had not transformed? Follow-up questions were asked when appropriate.

### **Procedure**

Ethical approval of the study was granted by affiliated universities. Semi-structured interviews were conducted via telephone. Participants were informed that they could skip any question and stop the interview at any time. The mean interview time was approximately 120 minutes (range: 68-192 min).

### **Qualitative Analysis**

First, a qualitative descriptive approach described by Sandelowski (2000) was utilized for the analysis of the perceived effectiveness and limitations of conventional ED therapy. This method

is applied when straight descriptions of participant experiences are desired. The aim of this approach is to provide a comprehensive summary of participant experiences, which remains close to the data.

Next, thematic analysis (Braun & Clarke, 2006) was employed to analyze and report patterns or themes within the data set regarding comparisons made between participants' ayahuasca experiences to conventional ED treatment for the healing of an ED. The interviews were analyzed at a semantic level, where themes were identified through use of the data alone. Coding of the interviews was done manually. To reduce the impact of investigator bias, investigator triangulation was utilized in that two researchers independently coded the interviews and organized the potential themes independently. In this study, a theme was defined as a pattern if it occurred for at least six of the 13 participants. Inter-coder reliability was calculated using the average percent agreement between the two coders using an agreement threshold of 80 percent. The two-membered team reviewed and discussed themes that did not meet the agreement threshold in order to arrive at a consensus on the final themes.

In order to increase data trustworthiness, recordings were transcribed verbatim and verified in order to ensure accuracy of content. To ensure that the emergent themes accurately reflected the participants' experiences, member checks were conducted. Member checks involved emailing participants with a summary of the qualitative analysis and allowed the participants to provide feedback reflecting whether the analysis accurately represented their experiences.

### **Quantitative Analysis**

In addition to the interviews, participants responded to Likert-scale questions evaluating overall satisfaction with ceremonial ayahuasca in healing of an ED. Items were structured on a

four-point scale from strongly agree to strongly disagree (example item: ‘Ayahuasca has helped me in my ED recovery’).

## Results

### **Descriptive Analysis: Experiences of Conventional ED Treatment**

Following the descriptive analysis of the interview transcripts, strengths and limitations of conventional ED treatment were noted. Strengths included improvements to physical and psychological health, positive therapeutic relationships and supportive group therapy. The limitations of conventional ED treatment included: the inability to access and heal the perceived core of the ED, a lack of human connection and understanding, treatment-related trauma, and perceived limitations of treatment staff.

**Perceived strengths.** Components of conventional ED treatment that were described as strengths most frequently related to the success of treatment with respect to physical outcomes, such as weight restoration and overall physical health (n=5). Other effective outcomes of conventional ED intervention were described in terms of behavioural, emotional or cognitive gains (n=6). In some cases, treatment was perceived to have led to positive behavioural outcomes, such as reductions in ED symptoms, the development of recovery maintenance skills, and/or the decrease or cessation of comorbid symptoms. From an emotional perspective, one participant described how conventional ED therapy helped her to identify and work through painful childhood memories.

Cognitive gains were also noted regarding the identification and transformation of unhealthy cognitive narratives. One participant who had engaged in CBT described applying the techniques and tools learned to challenge the maladaptive ED thoughts and behaviours:

The CBT itself [was helpful for] definitely identifying negative thoughts and learning to kind of have this third person perspective on the narrative, the critic and being able to take a place of challenging that voice. Also having handouts and things that had strategies for alternatives like what else to do if wanting to binge I think what was helpful, the therapeutic relationship as well as some concrete strategies to employ, and also identifying specifically elements of my mental narrative that I was beginning to learn I didn't have to necessarily believe I could have some distance from. (P-F)

Lastly, participants also identified that a positive therapeutic alliance with clinicians (n=2), as well as group therapy (n=3), were both supportive and helpful components of conventional ED treatment. Participant E, shared her positive assessment of her experience in group therapy: "Being in that group setting and seeing where it could go or where other people were in their lives, that and kind of sharing a similar experience, that was really helpful for me." (P-E)

**Perceived limitations.** The perceived limitations of conventional ED treatment were most often related to the ineffectiveness of these interventions with regard to what participants described as ED recovery. Some of these limitations included their inability through conventional ED therapy to access the perceived source of the ED (n=5). They also noted that treatment seemed to place too singular a focus on weight gain or symptom cessation. Participant A explained: "They [conventional ED therapies] don't address at the deepest level, what might be causing someone to engage in the eating disorder or the self-harming behaviour." For three of our study participants, conventional ED treatment was described as scary, isolating and in two cases, traumatic. One participant described she felt the need to engage in personal work to

help her move through the trauma she experienced as a child from an ED intervention at an inpatient hospital program:

My time in hospital - especially the token system - was more traumatic. I interpreted it as more traumatic than helpful. Actually, a lot of the work I did in personal [therapy] after that, and even ayahuasca, was related to kind of the traumatic experiences related to the token system, being kind of told that it wasn't ok to feel, essentially, and then being punished if I showed any [big] emotions in front of people. (P-D)

Some participants expressed a sense of being judged or not having a voice, both of which were perceived to contribute to an inability to be open and vulnerable during the therapeutic process (n=5). Two participants described that although well-intentioned, they perceived some staff to lack competency related to treatment implementation. Lastly, participants revealed in broad terms that conventional ED treatment was missing “something” (n=3), including a spiritual component to therapy or an overall sense of hope in the recovery process. As one participant explains, her engagement in therapy did not amount to substantial therapeutic gains:

I didn't really feel like I could move on, past it [the ED], I felt like there were certain things that I was grasping, but I just felt like the stronghold didn't go away, irrespective of how hard I worked on it. (P-E)

### **Thematic Analysis: Ayahuasca as a Therapy in Comparison to Conventional ED Treatment**

From the thematic analysis of the 13 interviews, five central themes were identified relating to comparisons made between ceremonial ayahuasca drinking and conventional ED treatment (Table 1). Specifically, participants reported that healing from an ED with ayahuasca differed

from their experiences of conventional ED treatment in that for them, ayahuasca; 1) was more effective 2) allowed for deeper healing 3) allowed for processing of intense emotions and/or memories, 4) provided lessons in and discoveries of love, self-love and self-care, and 5) provided a spiritual component to healing and recovery.

**Theme 1: Ayahuasca is a more effective form of healing from an ED.** Experiences with ayahuasca were described as effective in ED symptom reduction and helpful in overall recovery. One participant had experienced a sense of hopelessness regarding the recovery process and only after her experiences with ayahuasca did she encounter greater transformations in healing and recovery of from her ED:

I feel like traditional therapy methods didn't work very well on me, or I mean I feel like I was in it for so long that, I don't really remember any sort of milestones that I made in the last fifteen years even, with an eating disorder. I just didn't believe that it was even possible to get over it. I just thought I'd have to suffer with it for the rest of my life and, you know ayahuasca has definitely changed some huge, big chunks of it. (P-E)

She went on to add that had she known about ayahuasca earlier, she may have suffered far less: "If I'd known there was a way to make certain symptoms just go away, I would have done it like, 20 years ago." In some cases, it allowed for therapeutic breakthroughs, where conventional therapeutic approaches had been less successful. As one participant described;

With EMDR (Eye Movement Desensitization and Reprocessing), they [therapist] would measure things on a SUDS level which is a Subjective Units of Distress and that would bring the experiences we targeted down to a one to three on the SUDS level of distress - and ayahuasca takes those to a zero. So, it completely heals trauma. (P-M)



One participant (L), reported that her experiences with ceremonial ayahuasca resulted in remission from her ED: “I would say that in the time since ayahuasca, I haven’t struggled [with ED symptoms]. So that in a like, empirical sense I would say it’s been effective.” For other participants, ceremonial ayahuasca not only had a profound impact on reducing or eliminating ED symptoms but they also perceived ayahuasca to work more efficiently than conventional ED treatment. As one participant stated: “I’ve heard sitting with ayahuasca is like having 10 years of psychotherapy. I just think it’s fully different, I don’t think you could get to that same place even in 10 years of talking with someone.” (P-B)

**Theme 2: Ayahuasca allows for deeper healing.** Participants perceived that ceremonial ayahuasca drinking provided a more profound understanding of their ED. One participant who had recently completed ED treatment at a specialized residential ED program in Canada noted that a single ayahuasca ceremony allowed her to access a deeper level of awareness in terms of the root of her ED. She further explained that this newly gained insight into the perceived cause of the ED helped her to focus on the next steps needed for her recovery:

But I think it’s just a deeper recovery. It just goes deeper, it gets to the root of why it developed in the first place, and the things you really need to work on in order to get better. And sometimes, we’re blindsided and we don’t really know what in this present moment is essential for us to focus on and to work through, because we’re blindsided by all the other things that you need to get over. (P-K)

Another participant, a physician, described ayahuasca’s deep processing by making a comparison of the perceived mechanism of action of ayahuasca to conventional ED treatment. In

this manner, conventional ED treatment was perceived to target specific ED behaviour and symptoms whereas ayahuasca focused on the resolution of the perceived source of the ED:

Standard approaches - I guess to summarize - are very top-down, very centered around the behaviours and fixing the behaviours so that you can become functional, which is very similar to psychopharmacology as well, it's like suppressing symptoms so that you can become functional, whereas the work with the medicine [ayahuasca] and the work in somatic therapy, I would also add, is more of a bottom up approach that is very much really rewiring things, it's getting to the root cause and bringing in what was missing and resolving it on a deep, deep level that doesn't I don't think really get fully explored or touched upon in standard approaches. (P-F)

**Theme 3: Ayahuasca allows for the processing of intense emotions and/or memories.**

Participants described ayahuasca as a means by which they were able to access and process repressed or unresolved emotions such as grief and shame. For some, drinking ayahuasca allowed for a release of these emotions and participants felt these emotions were no longer “trapped” or “stuck” within the body. One participant shared an experience with ceremonial ayahuasca as emotionally painful but, unlike any other treatment method, it allowed her the opportunity to release these emotions:

I had a really, really tough experience but I'm so grateful because I feel 10 times lighter. And that doesn't have to do with just my body image, it's emotionally, it's like that stuff that I couldn't get to, the stuff that I can't even touch was touched and it's gone. That I can't touch with other methods. (P-C)

Furthermore, participants noted that ayahuasca helped resolve emotions associated with painful memories, most often related to their childhood. One participant shared an experience in ceremony where she was able to identify and resolve a longstanding pattern of intergenerational shame:

The ayahuasca ceremonies, they're revealing and healing in the moment. It's so hard to explain, but like for example, one whole entire ceremony was starting from basically conception to now, about all the moments that shame has entered my life and when I was able to see it with other people and women that I loved and I would see it. I would see it with my mother and my grandmother and then in that moment, we would heal it together. So, there was not just a revelation, but there was a resolution. So, I didn't really need to do a ton of talk therapy afterwards. (P-L)

Lastly, some participants revealed that unlike conventional ED treatment, once ayahuasca was ingested, the experience that followed was not one that they could avoid or cease. This was perceived to be a positive, albeit challenging feature of this medicine work as described by participant E:

I mean with ayahuasca during ceremony you can't go anywhere, you can't hide from it, and I think that is, I mean for me, it was like one of the first times where I just sat, in fear or sat in sadness, or sat in memories that I was trying to hide from. You sit in it, and after you drink you just have to sit and, there are very few things that I know of that do that for you, you know where you can't just can't leave. (P-E)

**Theme 4: Ayahuasca allows for the embodiment of love, self-love and self-care.** In comparison to conventional ED treatment, several participants reported that ayahuasca provided

them with profound lessons of love, self-love and self-care. A participant who struggled with her self-worth found that the use of positive affirmations received in therapy didn't lead to the expected changes in her negative self-evaluation. Instead, her experiences with ceremonial ayahuasca provided her with an unyielding belief that she is loved and lovable:

There are some insights that can never be shaken from me. I used to try to tell myself that like "Oh people love me" and then when I actually got it in my heart, that's what ayahuasca would do is move things from your brain to your heart so that they became convictions within you that no one could ever shake from you. (P-M)

For participant I, experiences with ayahuasca provided her with teachings of self-care. She described newfound insight into her own inner strength which allowed her to identify and implement better life choices that fostered a greater sense of well-being:

It showed me that I had greater choice, that I had the ability to choose to live differently in a way that I had never seen before, or thought of, or experienced before in any other form of therapy. (P-I)

**Theme 5: Ayahuasca provides a spiritual component to healing/recovery.** Another distinction made between ayahuasca and conventional ED treatment related to the role of spirituality as a component of healing. Participants related that ayahuasca provided healing of the spiritual aspect of the self, an approach to recovery perceived to be missing from conventional ED treatment in which they participated. Participant I shared; "The medicine [ayahuasca] worked with my body, and my soul, my spirit on a deeper level than any other doctor ever could have." She further supported this theme by adding; "It [ayahuasca] offers a form of spiritual and

existential introspection and a form of physical healing that is unlike anything else that I've experienced."

In addition, other participants expressed embodying a connection with a greater spiritual force such as God, a greater intelligence or nature. This newfound connection or access to additional resources for healing was a source of great comfort. As participant G simply stated; "Ayahuasca for healing eating disorders could help in my case with being able to trust some greater force."

**Theme 6: Bridging ayahuasca with modern psychotherapy.** Beyond the context of comparison, an additional theme that emerged throughout the participant interviews related to bridging the use of ayahuasca with conventional psychotherapy. Half of the participants recommended that ceremonial ayahuasca drinking should 1) include access to conventional psychotherapeutic support, and/or 2) incorporate strengths of conventional ED treatment approaches (e.g. focus on re-nourishment). Participant C, a life coach stressed the importance of formal therapeutic support for integration of the deep work facilitated by ayahuasca when taken outside of traditional indigenous settings:

I think that the way that it's done in the Amazon, is it's done in small villages and there is the shaman there to take care of those people [after the fact]. You know that's the way it was and so you need to have follow-up. You need to have something for people. It's like you come out there and you processed it and you just have to go through shit and you need to have support around that. . . . Because you can't just stir people up and then send them on their way and believe that everything is going to be fine. (P-C)

Additionally, participants spoke to the real or potential benefit of including Western psychotherapeutic support alongside ayahuasca drinking. One participant shared that her weekly ED support group sessions helped provide her with a contextual bridge to her ayahuasca experiences:

I am currently in an eating disorder support group once a week, so that helps. I can't really talk about my [ayahuasca] experiences there, but it does just help to kind of connect it to the eating disorder behaviour and thought process around that. (P-B)

Lastly, Participant G highlighted the importance of nutritional rehabilitation, a process supported by conventional ED treatment programs. Her suggestion to incorporate a refeeding component to the ayahuasca ceremonies, could provide a more comprehensive healing process: "Ayahuasca has a lot of the potential but it needs the support of, I think there's a piece of the refeeding that's important that the Western hospital does."

Lastly, it is important to note that one study participant did not provide feedback related to the comparison of ayahuasca to conventional ED treatment as she felt these questions were not personally relevant. She expressed that her intention to drink ayahuasca was not specific for ED-related healing and therefore any comparisons could not be made, nor could she attribute her experiences with ayahuasca as helpful or significant in her process of recovery from an ED.

Table 1

*Overview of the thematic analysis of semi-structured interviews exploring ED-healing from ayahuasca in comparison to conventional ED-treatment*

Theme	Supporting Quote	Participant Endorsement	
		%	n
Ayahuasca allows for deeper healing	Ayahuasca for me was able to get to the source and to show me and to keep me	53.8	7

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	from moving into unconsciousness during the process, whereas this was all too easy in the everyday consciousness therapy that we undergo. (P-A)		
Ayahuasca provides a more effective form of ED-healing	Baby steps versus leaps and bounds. I mean yeah talk therapy wasn't for me. (P-C)	53.8	7
Ayahuasca allows for the processing of intense emotions and/or memories	My experience in most therapies is that as soon as emotion is brought up it's more a matter of stuffing it back down again where as ayahuasca is like 'let's feel it and let's sit with it and feel it until it makes sense. (P-D)	69.2	9
Ayahuasca provides a spiritual component to healing/recovery	I'd say the things it did address that other therapies didn't address were the spiritual elements about the body and about life. (P-I)	53.8	7
Ayahuasca provides lessons and discoveries of love, self-love and self-care	I would say, one of the main points was, being able to teach me self-love and being able to value myself. (P-B)	46.2	6
<i>Additional theme</i>			
Bridging ayahuasca with modern psychotherapy	I'm hoping that these things will change to allow for better use and integration of these medicines into health and wellness practices. I think it's given me a greater sense of hope and a greater sense of trust in healing work and in alternative medicine. (P-I)	53.8	7

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### Quantitative Analysis

Participants were also invited to provide an evaluation of their overall satisfaction with ceremonial ayahuasca use with three Likert-type items (Table 2). Twelve of the 13 participants agreed or strongly agreed that their experiences with ayahuasca helped them to deal more

effectively with life's challenges and that ayahuasca helped in their recovery from an ED. Eleven participants agreed or strongly agreed that they would recommend ayahuasca to a friend struggling with an ED. Of these 11 participants, five added that this recommendation would come with certain caveats, some of which included that; ayahuasca may not be suited for everyone, individuals that do seek ayahuasca need to be informed and prepared, and that following ayahuasca drinking, professional support for the integration of these experience is needed. Two participants would not recommend ayahuasca to a friend with an ED; participant J explained that because of her current work at an ED center, she felt it would be professionally irresponsible to provide such a recommendation due to limited research of ayahuasca's use for the healing of EDs specifically. Participant H shared that she would only recommend ayahuasca if all other treatment options were exhausted.

Table 2

*Likert-scale responses of the overall satisfaction with ceremonial ayahuasca drinking reported in frequencies and percentages*

	Strongly Agree	Agree	Disagree	Strongly Disagree
Ayahuasca has helped me deal more effectively with life's challenges	n=8 61.5%	n=4 30.8%	n=1 7.7%	n=0 0.0%
Ayahuasca has helped me in my ED recovery <sup>1</sup>	n=5 41.7%	n=6 50.0%	n=1 8.3%	n=0 0.0%
If a friend were need of similar help I would recommend ayahuasca	n=6 46.1%	n=5 38.5%	n=2 15.4%	n=0 0.0%

<sup>1</sup>(n=12) One participant did not find the question personally relevant and responded with not applicable



## Discussion

EDs are exceptionally challenging to treat and innovative alternative and adjuncts to conventional treatment must be explored (Le Grange, 2016). As such, this exploratory study examined the perspectives of individuals with experience within conventional ED treatment programs and who subsequently or concurrently participated in ceremonial ayahuasca drinking. With respect to their experiences in the context of conventional ED treatment programs, participants reported as strengths the fact that these models targeted physical, emotional and cognitive aspects of recovery. They also highlighted the healing power of a supportive therapeutic relationship as well as the benefit associated with group-based therapies. That said, from our participants descriptions of conventional ED treatment, medical stabilization and cessation of behavioural symptoms were necessary but not sufficient for recovery. These findings are supportive of and consistent with a body of research examining patient perspectives of conventional ED treatment where individuals perceive treatment to include both helpful and unhelpful components (Espindola & Blay, 2009; Timulak et al., 2013).

Analysis of participants' comparative perspectives revealed several key themes. These centered around the perception that, unlike their experiences within the conventional ED treatment models, ceremonial ayahuasca: led to more and rapid reductions in ED thoughts and symptoms; allowed for the healing of what was regarded as the root of the ED; supported a more effective working through of painful feelings and memories; allowed for the internalization of greater self-love; and incorporated spiritual elements of healing.

In comparison to conventional ED treatment, participants attributed their experiences with ayahuasca led to greater improvements in the reduction or discontinuation of ED symptoms

which included a perceived greater efficiency of such changes. This finding is encouraging in that the reduction or cessation of behavioural symptomology such as restricting, bingeing and purging is a hallmark of the ED recovery process (Khalsa et al., 2017). Furthermore, our participants expressed that their experiences with ceremonial ayahuasca were perceived to generate more efficient changes with respect to ED symptomology. This is a noteworthy finding since a recent 20-year follow-up study of individuals with an ED reported a lengthy ED duration of  $7.1 \pm 5.9$  years and a stability of remission of 39.3% (Fichter, Quadflieg, Crosby, & Koch, 2017). The protracted course of the illness and its subsequent effect on quality of life highlights the lack of therapeutic efficiency by current ED interventions and illustrates the need for approaches that have the potential to produce long-lasting therapeutic outcomes.

Many of the participants in this study reported that their experiences with ayahuasca provided awareness and understanding of their perceived root cause of their ED. The reporting of this phenomenon is not new within the ayahuasca literature. Researchers in the field have suggested that ayahuasca helps to heal deep-rooted issues by bringing to the surface conscious and unconscious memories and repressed emotions and may provide insight and perspective into unhealthy behaviours (Liestner & Prickett, 2012). Exploring the therapeutic potential of ritual ayahuasca use in the treatment of individuals with substance use disorder revealed that, like our sample, participants gained insight into what they believed was the cause of their problematic substance use (Loizaga-Velder & Verres, 2014). This newfound understanding was regarded as key to move through trauma, emotional pain and associated maladaptive behaviours related to the substance use. With respect to EDs, a qualitative study of individuals' perspectives of treatment for anorexia nervosa described that treatment approaches that provided insight and

understanding to the underlying source of their ED would be more beneficial in their process of healing from an ED than solely focusing on symptoms and food issues (Eivors et al., 2003; Rance, Moller, & Clarke, 2017). Experiences with ayahuasca may also provide an opportunity to address the “why” in a way that is profoundly meaningful to the participant, and in turn, leverage this narrative to adopt more positive coping strategies.

Similarly, participants in this study also reported that ceremonial ayahuasca drinking allowed for the processing of emotion in a way they felt was deeper than what they’d experienced in the context of conventional ED treatment. Consistent with this finding, ayahuasca drinking has been reported to trigger painful memories and their associated emotions, followed by a process of productive reprocessing and restructuring (Bouso & Riba, 2014). We believe this finding is particularly important given that emotions are known to play a central role in the development and maintenance of the disorder (Brockmeyer et al., 2014; Racine & Wildes, 2013). Specifically, ED symptoms are regarded as a vehicle to help soothe and regulate difficult emotional processes. That ceremonial ayahuasca drinking seems to facilitate such deep healing in this domain, and perhaps more so than what is possible in the context of conventional ED therapies, is another reason for the field to turn its attention to this potential adjunct to treatment.

Participants in this study also described that experiences with ayahuasca differed from conventional ED treatment in that it provided them with a greater capacity to embody self-love in thought, feeling and action. This finding is particularly relevant given that individuals with EDs struggle with negative evaluation of their self-worth and often engage in harsh self-criticism and harmful behaviours (Fennig et al., 2008). Appropriately, several therapeutic ED interventions have embraced an approach that focuses on nurturing self-compassion as well as

transforming the self-loathing internal dialogue (Brennan, Emmerling & Whelton, 2015; Goss & Allen, 2010). One study incorporating compassion-focused therapy in combination with a standard CBT treatment program found that for those with bulimia nervosa clinically significant improvements in ED symptomology were reported (Gale, Gilbert, Read, & Goss, 2014). Modest improvements were noted for individuals with anorexia nervosa, suggesting that cultivating a self-compassionate relationship may be more difficult for this population. As such, it is encouraging that, like our participants, individuals who have participated in ceremonies elsewhere spoke to a self-transformation where they viewed and treated themselves with more love and care (Kavenská & Simonová, 2015). By making room for self-love, individuals with an ED may have access to additional internal resources to then transform their patterns of destructive thinking and behaviour and instead attend to and heal the devalued parts of the self.

Lastly, for many participants, ayahuasca helped facilitate spiritual healing, a perceived mechanism of transformation that perhaps differentiated most distinctly the experiences of participants in the context of ceremonial ayahuasca from conventional ED treatment. These findings are in line with the psilocybin literature where psilocybin use was observed to elicit powerful spiritual experiences (Griffiths et al., 2017). Furthermore, at two-month follow-up, participants rated the experience as having substantial personal meaning and spiritual significance and attributed to the experience sustained positive changes in attitudes and behaviour (Griffiths, Richards, McCann, & Jesse, 2008). A spiritual experience can be defined as a personal experience that involves the discovery of meaning in life and a quest for the sacred (Pargament, 2007). An embodied sense of spirituality has been negatively correlated with anxiety, depression and problematic substance use and positively associated to mental well-being

(Bonelli & Koenig, 2013; Leigh, Bowen, & Marlatt, 2005). Furthermore, in a meta-analytic review, research has demonstrated that psychotherapies that include a religious/spiritual component have been found to be more effective than those that did not (Smith, Bartz and Richards 2007). As it relates to EDs specifically, higher levels of spirituality have been shown to be associated with lower levels of ED symptomology (Akrawi et al., 2015; Boisvert & Harrell, 2012). In a study by Richards, Berrett, Hardman & Eggett (2006) conducted among patients receiving inpatient ED care, outcomes were compared among those who participated in a spirituality treatment group and a cognitively or emotionally structured treatment group. Those individuals who participated in the spirituality support group reported increased psychological well-being and lower ED symptomology in comparison to the other treatment groups. These bodies of research, in combination with our participants' testimonials, suggest that by nurturing spiritual growth, a connection to something greater than the self can be fostered and in turn lead to improved mental health outcomes. The abovementioned findings reinforce the need for the ED field to consider a larger role for spirituality and spiritual practices in the context of mainstream treatment models and programs. To our knowledge, none of the more widely-accepted ED treatment protocols include an explicit focus on the cultivation of spirituality. For individuals who value or are in need of spiritual growth, a framework is needed regardless of how it is to be achieved.

Finally, although the primary focus of this study was comparative, we do not believe that ayahuasca drinking should be considered outside of conventional treatment modalities. In fact, many of our informants held the same opinion. Despite its limits, conventional therapy models are effective for many and we would advocate for a more formal exploration of an integrative

approach that includes the wisdom from both traditional indigenous medicines such as ayahuasca as well as the extensive theoretical and clinical knowledge that has emerged from the conventional approach to the treatment of EDs. This is especially important given that EDs can be related to serious medical problems and that they can be viewed to some degree as culture-bound (Keel & Klump, 2003).

### **Clinical Implications**

Considerations of ayahuasca as an innovative healing tool for EDs must be reviewed in the context of several potential risks associated with ayahuasca drinking. Ayahuasca is a powerful psychoactive substance that can have significant effects on neurotransmitters in the brain (McKenna, 2004), and like other psychedelic drugs, can induce frightening visions that may cause psychological distress in vulnerable populations (Johnson, Richards, & Griffiths, 2008). Although more research is required to clarify the appropriateness and safety of ayahuasca among individuals with an ED, potential related risks for this population include cardiovascular issues, electrolyte disturbances and the use of contradicted SSRIs prescribed for the treatment of comorbid disorders (Callaway & Grob, 1998; Riba et al., 2001). Additionally, that preparatory diet prior to, and the purging often associated with, the ritual consumption of ayahuasca was found to activate some temporary patterns of preoccupation with food choices (Lafrance et al., 2017). Although there were no instances where these thought patterns led to increased ED symptoms, further investigation into the potential risks of dietary restrictions and purging in the context of ayahuasca ceremony preparation and participation is warranted.

Moreover, as ayahuasca is not a part of the culture or health-care practices in Canada, the United States or Europe, individuals with EDs who seek out ayahuasca for healing may lack the

necessary support required for the processing of these experiences. In order to best serve these individuals, we suggest that therapeutic support should be provided by mental health professionals trained in both ED treatment and in the integration of ayahuasca experiences. For this to occur, changes in policy are required to continue research of ayahuasca in a legal, safe and controlled manner.

### **Study Limitations**

This study is exploratory and should be viewed in the context of several limitations. Firstly, our study participants were self-selected, therefore their experiences may not be representative of the majority of individuals with a history of an ED and with experiences of conventional ED treatment. Secondly, this comparison study is unable to clearly discriminate ED improvements described by participation of ceremonial ayahuasca from prior experiences in conventional ED treatment. As most individuals in our study participated in ayahuasca ceremonies after their involvement with conventional ED treatment, we cannot determine the impact of these prior treatment experiences on the perceived positive outcomes from their ayahuasca experiences. The impact or influence of these previous therapeutic interventions may have also primed, deepened or initiated a level of self-awareness and readiness for healing. Thirdly, this study included participant experiences that were retrospective in nature which could potentially result in less than accurate reports of their experiences. Retrospective recall is potentially sensitive to biased reporting and memory deterioration (Hardt & Rutter, 2004). This may be especially true for those that had difficulty recalling precise descriptions about the modality of treatment received during the course of their conventional ED treatment, and particularly for those that received treatment earlier in their lives. Furthermore, for all participants, conventional ED treatment was

experienced as first-line treatment and less recent in comparison to their experiences with ayahuasca. It is possible that the recency of their experiences with ayahuasca may have influenced the recall and emphasis of the positive impact of ayahuasca on ED outcomes. Lastly, the qualitative data collected in this study comes from a heterogeneous sample in that not all participants received the same conventional ED treatment protocol nor did they participate in the equivalent number or type of indigenous ayahuasca ceremonies. Thus, we acknowledge, that participants' different experiences may have affected how their experiences were received as a function of these variables.

## **Conclusion**

This qualitative study provides a comparison of individual experiences with conventional ED treatment and ceremonial ayahuasca drinking, and explores the potential of ayahuasca as an adjunctive ED treatment. Participants were positive about their experiences with ceremonial ayahuasca in that it seemed to lead to deep shifts across a number of relevant areas, and in a way that was perceived to be more efficient than conventional treatment modalities. That being said, we are in no way suggesting that this potential modality replace conventional treatments or that it holds higher value; we would like to encourage other ED clinicians and researchers to consider the possibility that this traditional indigenous healing modality may be helpful for some patients. The results of this study suggest that, at least for some, and in an appropriate context, ayahuasca can be a valuable therapeutic tool and can act as a catalyst that can render psychotherapeutic processes more effective, and perhaps in cases where the standards are not yielding the desired outcomes. If anything, our hope is for this study to initiate a dialogue between clinicians as well



as researchers in the ED field with healers practicing indigenous medicines in order to eventually build a framework where benefits of both approaches can be mutually supported.

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## **Conclusion**

The current study examined the experiences and perceived outcomes of individuals with EDs and ceremonial ayahuasca drinking. Given that current approaches to ED treatment are lacking in effectiveness, the current study was conducted to explore ayahuasca's potential therapeutic value in the healing of EDs. The results suggest that ayahuasca may facilitate healing from an integrative; physical, psychological, social and spiritual perspective. In view of the complex combination of biological, psychological and social factors in the development and maintenance of EDs, a biopsychosocial-spiritual approach may better support ED recovery. Additional results from this study found that experiences with ayahuasca provided more effective and deeper healing in contrast to treatment received from conventional ED programs. Other differences noted included ayahuasca's perceived ability to help move through difficult emotions and memories as well as foster a greater love and acceptance for the self. Taken together, the results provide future implications for the integration of ayahuasca practices with conventional ED treatment approaches to potentially facilitate improvements in ED treatment outcomes. The overall findings of this thesis suggest that ceremonial ayahuasca may provide an alternative or adjunctive therapeutic option for some individuals along the continuum of ED recovery. In summary, although the results are preliminary and qualitative in nature, they support those of previous studies showing positive outcomes of ceremonial ayahuasca drinking on symptoms of depression, anxiety and addiction. Given the potential to alleviate, for some a chronic and debilitating course of the illness, further research on ayahuasca as a potential therapeutic alternative or adjunct to treatment is warranted. Future studies that involve clinical trials that are

controlled and larger in scale are necessary in order to validate ayahuasca's potential as an ED healing tool and further clarify whether ayahuasca is appropriate for individuals with an ED.

## Appendix A

## Laurentian University Research Ethics Board Approval



**FORM FOR ANNUAL REPORT, REPORT COMPLETION,  
AND REQUEST FOR CHANGES TO A PROJECT  
for research projects involving human participants**

<b>File #</b>	2014-11-09
<b>Title of Project</b>	The Role of Ceremonial Ayahuasca Use and the Healing of Eating Disorders: A Qualitative Study
<b>Principal Investigator and Supervisor (if applicable)</b>	Adele Lafrance Robinson, Psychology
<b>Is this a multi-year project? (Yes/No)</b>	Yes
<b>Date of original ethics approval</b>	Mar 3 <sup>rd</sup> , 2015
<b>Date project completed (if applicable)</b>	N/A
<b>For incomplete projects, tentative date of completion of project.</b>	April 30th, 2017
<b>For incomplete projects, date of next report (no more than 1 year after this report)</b>	
<b>Date This Report Submitted</b>	June 6, 2016

- “Completed” means having terminated all contact with potential or actual participants for the purposes of the project, except for final feedback of the project’s results.

**SECTION A – NOTICE OF COMPLETION OF PROJECT**

1	How many subjects participated in the project?	
2	Were some subjects removed from the study? • How many, and for what principal reason?	
3	Did some subjects leave the study after they agreed to participate? • How many, and for what principal reason?	
4	Specific issues or problems that arose (e.g., difficulty in recruiting, unexpected or serious events, ambiguities, etc) and how you handled them.	
5	How are you ensuring data security during storage?	

**SECTION B – REQUESTING TIME EXTENSIONS OR CHANGES TO A PROJECT**

	<i>Briefly describe the changes proposed. Please re-submit your full revised project to REB for evaluation, highlighting any changes in a different colour, and attach any new letters/forms that have been changed.</i>	
6	• Time extension	
7	• Recruitment methods or types of participants	
8	• Procedures	
9	• Forms: letters, consent etc.	
10	• Other changes not listed above	Addition of principal investigator: Marika Renelli, MA Psychology Student.

<b>Signature of Principal Investigator</b>	<b>Date</b>
Adele Lafrance Robinson Marika Renelli	June 6, 2016

Revised September 2010

Return by mail or email (PDF signature scan is acceptable) to the Research, Development and Creativity Office (L-313) on or before the date indicated for the final report on the original Ethics Approval Form.

## Appendix B

### Semi-Structured Interview Guide for Participants

If you agree I would like to record our interview from here on in order to ensure accuracy and objectivity of the information you share with me. However, we can turn off the recorder at any moment and delete parts of the interview transcripts if you don't feel comfortable with them.

Please respond according to how you really feel and not the way you think it would be better to respond. There are no right or wrong answers. Your interview will be completely confidential.

1. Short questionnaire: Individuals who participated in ayahuasca for the treatment of an eating disorder

Please note: This information is strictly confidential and will be used solely for scientific purposes. All interviews will be anonymized.

Date:

Interviewer:

Consent obtained:

Code provided:

#### *1. General information:*

Pseudonym (the name that you would like to appear in testimony):

Age:

Gender:

Sexual orientation:

Born in?                      City \_\_\_\_\_ Country \_\_\_\_\_

Place you were brought up:    City \_\_\_\_\_ Country \_\_\_\_\_

Place and country of residence: City \_\_\_\_\_ Country \_\_\_\_\_

Family / marital status

Cultural/ethnic background:

Mother: Still living? yes [ ] no [ ]

Father: Still living? yes [ ] no [ ]

## 2. *Family and social life*

2a. Who do you live with?

2b. If not living with parents, age when you left home?

2c. With whom do you spend most of your free time?

2d. Do you have ongoing conflicts with anybody?

## 3. Work / study

3a. Actual occupation:

3b. Satisfaction with occupation:

3c. Currently employed?

3d. Highest level of education completed:

3e. Annual household income:

## 4. Health

4a. How is your general health? Current height, weight

4b. Major illness or health conditions *currently* being managed?

4c. Major illnesses or health conditions *in the past*?

## 5. Contentment with life

5a. How satisfied are you with your life?

5b. With which areas of your life are you satisfied?

5c. With which areas of your life are you dissatisfied?

6. Clinical history

6a. Do you have an active eating disorder / eating disorder symptoms?

If yes, please specify current symptoms, frequency and context of symptoms. (Average per week or month)

- a. restricting
- b. bingeing
- c. purging
- d. over-exercising
- e. non-medicinal use of laxatives
- f. other

If no, please specify past symptoms, frequency and context of symptoms. (Average per week or month) at the worst of the illness

- a. restricting
- b. bingeing
- c. purging
- d. over-exercising
- e. non-medicinal use of laxatives
- f. other

6b. Age of onset of ED thoughts / symptoms

Age of diagnosis and diagnosed by whom and what was the diagnosis?

6c. Lowest/highest weight (what was the height if they weren't finished growing at the lowest weight) (with age); healthy weight?

6d. Previous ED-focused therapies (before ayahuasca experiences)

If you have undergone previous therapies please specify where and when as well as whether they were effective and how. What model of therapy? Outpatient? Day treatment? Inpatient? Was your family involved in your treatment? If so - how? How did it go?

6e. Have you made attempts to recover on your own without formal treatment?

Previous non-ED Symptoms and Treatments

7a. Description of other current symptoms (anxiety, depression, substance use, self-harm behaviours, etc.)

Description of other past symptoms (anxiety, depression, problematic substance use, self-harm behaviours, etc.); Any other MH diagnoses? What and by whom?

7b. Traumas?

7c. Previous non-ED-focused therapies (before ayahuasca experiences)

If you have undergone previous therapies please specify where and when as well as whether they were effective and how. What model of therapy?

7d. Did you ever take psychotropic medication (medications prescribed for mental health issues)? If so, when, what, dosage, and for how long? Describe your psychotropic medication history, including current use.

7e. How did you manage your medication use leading up to the use of Ayahuasca? Did you detox – if so, how long before? What were the restrictions?

7f. Did you use of psychotropic medication change after participating in Ayahuasca ceremonies?

What is your understanding of that change, if applicable?

7g. Individual and family patterns with emotion when growing up

- individual : as a child/teenager, what was your relationship with emotion? Anger, sadness/vulnerability, shame? Did you ever experience challenges/traumas in

childhood/adolescence that you did not disclose? Why not?

- family: how did family members express emotions when you were a child/teenager (mom vs. dad vs. siblings vs. individual)?; were there any taboo emotions?; what were the “rules” around the expression of certain emotions in the family?; where there family secrets?

7h. Family history of mental health issues

#### *B. Interview guideline*

In continuation I will ask you additional questions about your history of eating disorder symptoms and about your experience(s) with ayahuasca.

8. Reason(s) for seeking out ceremonial use of ayahuasca

8a. What led you to seek out an experience with ayahuasca? When? Was there an intention for healing ED symptoms?

8b. How much did you pay per ceremony (what was the range)? How were you able to secure the means?

8c. Context of ayahuasca experiences:

Please specify where (provide explicit option not to disclose country of use) and when.

How many ayahuasca rituals did you participate in total (during your period of healing)?

What was the frequency?



Describe the context in which the rituals took place. (e.g. Religious [Santo Daime, UDV, Barquinha, other]; Amazonian tradition (where?); eclectic ceremony, guided one-on-one therapeutic session(s), no ceremonial context, other).

8d. Was therapeutic support offered after your encounters with ayahuasca?

Did you participate in these offers of support?

What did the therapeutic support consist of?

9. Subjective ED theory

9a. Did you have any personal theory about the cause of your eating disorder before drinking ayahuasca? Please explain. Anything to do with your mother/father in particular?

Do you feel differently about the cause of your eating disorder after drinking ayahuasca?

(including mother/father in particular)

Please explain.

9b. Do you think that some of these issues have been resolved through your experiences with ayahuasca?

10. Subjective evaluation of therapeutic value

10a. Were the ayahuasca rituals helpful for you re: ED symptoms in particular? Can you elaborate?

10b. Please explain why. What is your understanding of how Ayahuasca was helpful with respect to ED symptoms? Other mental health symptoms? Emotion regulation?

10c. Are there any resources / information / strengths you have discovered through ayahuasca that were or are important for managing your eating disorder?

10d. In your experience, did the ayahuasca rituals have an effect on ED symptom patterns? Did it have an impact on your experience of your body shape or size (did your body seem bigger or smaller)? If purging through vomiting was a symptom, did purging through vomiting during ceremony impact your relationship to purging outside of ceremony in any way?

In your experience, did the ayahuasca rituals have an effect on others symptoms such as anxiety, depression, substance use, self-harm behaviours?

10e. What impact did the ayahuasca experiences have on your overall life?

10f. How did your Ayahuasca experiences compare to standard ED treatment? Were there any critical points changed by the encounters with ayahuasca that previous therapies had not transformed? Please describe.

10g. If you experienced benefit from the use of ceremonial ayahuasca, were the changes linear and permanent? Did you experience lapses/relapses?

11. Undesired side effects

11a. Were there any undesired effects in your life through drinking ayahuasca?

11b. Did you ever drink ayahuasca to engage in symptoms such as food restriction or purging?

11c. Did you ever use *dietas* to engage in symptoms such as food restriction or purging?

11d. Do you think that people can become dependent on or “addicted” to ayahuasca (in general)?

Do you think ayahuasca can be addictive for you? please explain

Do you describe yourself as a “drug user” (with respect to your drinking ayahuasca specifically)?

11e. Did you perceive any risks associated with your use of Ayahuasca?

12. Subjective experiences considered as important

12a. Were there any experiences during the ayahuasca sessions that were most significant for you in your therapeutic process from recovery from an ED?

12b. Why?

12c. Please describe your most important Ayahuasca experience(s) (related to ED)

12d. As a result of Ayahuasca, did you notice a shift in your emotional style? Your tendency to approach / avoid emotion? Your ability to regulate emotions?

12e. Do you see any link between ED symptoms and emotional style / ability to regulate emotions? Did ayahuasca influence this process for you?

12f. Has your weight changes since your participation in ayahuasca ceremonies? Elaborate if yes/no.

13. Other therapeutic elements

13a. With regard to the treatment of your ED, how effective were other elements of the ayahuasca therapeutic program you have participated in?

13b. Which have been the most important ayahuasca therapeutic elements?

13c. Would you recommend the ceremonial use of ayahuasca to others struggling to recover from an ED?

13d. What are your thoughts regarding family involvement in ceremony (a ceremony with your caregivers)?

14. Experiences with other psychedelics substances prior to drinking ayahuasca

14a. Have you had experience(s) with other psychedelics prior to ayahuasca? What about after?

14b. Which psychedelics? Number of times used? Context (e.g. recreational only; eclectic ceremony, guided one-on-one therapeutic session(s), no ceremonial context, other)

14c. Was there a difference between these previous experiences and ayahuasca experiences?

14d. What did these previous experiences consist of (e.g. visions, death experiences, memories)?

15. Experience with religious or spiritual practices prior to ayahuasca

15a. Have you participated in organized religion? What religion and recent pattern/level of involvement? Did ayahuasca change that?

15b. Have you participated in other types of spiritual-related practices (e.g. meditation, yoga)? Pattern/level of involvement? Did ayahuasca change that?

16. Spiritual significance of experience with ayahuasca

16a How spiritually significant has your experience with ayahuasca been so far?

1 not at all spiritual

2 slightly spiritual

3 moderately spiritual

4 very spiritual

5 the most spiritually significant experience of my life

0 Can't really say

16b Comments about your answer:

17. Integration

17a. Did you receive any support for integration of the ayahuasca experiences?

If so what did this support consist of?

17b. How well do you think you have integrated the ayahuasca experiences into your life in general?

18. Aftercare

18a. What helped you after the completion of the ayahuasca assisted-treatment to stay asymptomatic / reduction of symptoms?

19. Well-being and life satisfaction

19a. Do you believe that your experiences with ayahuasca have led to changes in your current sense of personal well-being or life satisfaction?

1 has decreased very much

2 has somewhat decreased

3 is about the same

4 has increased somewhat

5 has increased very much

0 Can't really say

19b. Comments about your answer:

19c. How open are you with others (friends/family) about your experiences with ayahuasca?

20. Participation of ayahuasca ceremonies after end of treatment

20a. Have you participated in ayahuasca ceremonies after the end of treatment / after considering yourself "recovered"? If you are still attending ceremonies, please explain why.

20b. If you consider(ed) yourself recovered prior to your use of ayahuasca, how did the experience relate to your recovery or your experience of recovery, if at all.

21. Critique and suggestions for improvement

21a. How satisfied are you with your experience of healing with ayahuasca in general?

21b. What do you think could be or should be done differently?

21c. How did you feel about the received frequency of participation of ayahuasca healing?

Would you like to have had more / less ayahuasca sessions than offered or immediately available?

22. Overall satisfaction with ceremonial use of ayahuasca

	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4
Ayahuasca has helped me deal more effectively with life's challenges				
Ayahuasca has helped me in my ED recovery				
If a friend were need of similar help I would recommend ayahuasca				

23 Specific feedback on elements of ceremonial use of ayahuasca

With regard to the treatment of your ED, how helpful have the following therapeutic elements been? *Interviewer: if participant has not experience any particular aspect check not applicable.*

	Not at all helpful 1	Somewhat helpful 2	Moderately helpful 3	Very helpful 4	Not applicable 5
<i>Purgas</i> (treatment with emetic plants)					
Overall ayahuasca experience/ritual					
<i>Icaros</i> (songs) in the rituals					
<i>Limpadas</i> (cleansing) in the rituals					

Scents used in the rituals					
Tobacco used in the rituals					
<i>Dietas</i>					
Discussions after about the ayahuasca experience					
Other (please specify)					

Part A. In the 6 months prior to working with ayahuasca for the first time, how many times per week did you (on average; note any comments):

1. Intentionally restrict your nutritional intake (less than your body required)?
2. Eat what others would describe as unusually large amounts of food in one sitting, and feel a loss of control during that experience?
3. Engage in compensatory behaviour such as purging through self-induced vomiting?
4. Engage in compensatory behaviour such as over-exercising?
5. Take laxatives as a way to control your weight or shape?
6. Take diuretics as a way to control your weight or shape?
7. Participate in food-related rituals before, during, or after eating?
8. Other

Part B. Since working with ayahuasca (note last time), how many times per week did you (on average; note any comments):

1. Intentionally restrict your nutritional intake (less than your body required)?
2. Eat what others would describe as unusually large amounts of food in one sitting, and feel a loss of control during that experience?
3. Engage in compensatory behaviour such as purging through self-induced vomiting?

4. Engage in compensatory behaviour such as over-exercising?
5. Take laxatives as a way to control your weight or shape?
6. Take diuretics as a way to control your weight or shape?
7. Participate in food-related rituals before, during, or after eating?
8. Other

\*Adapted from the Eating Disorder Examination – Questionnaire (Fairburn & Beglin, 2008)

24. Any other comments you find relevant in relation to your experiences with ayahuasca and healing from your eating disorder? In one sentence can you summarize your experience with ayahuasca in the context of healing from an ED?

25. Are you interested in obtaining information to access ED treatment in your geographic area?

26. Would you like a copy of the results once the study has been completed?

Fairburn, C.G., Beglin, S., 2008. Eating Disorder Examination Questionnaire (EDE-Q6).

Appendix in Fairburn, C.G. Cognitive Behavior Therapy and Eating Disorders. Guilford Press, New York.